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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,348

07/02/2004

Arthur Joseph dela Houssaye

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EXAMINER

TALMAN, JAMES R

ART UNIT

PAPER NUMBER

3709

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/710,348

Applicant(s)

DELA HOUSSAYE, ARTHUR
JOSEPH

Examiner

James R. Talman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In paragraph 3, line1, "high frequency" should be changed to --high-frequency--.

On page 7, line 15, "centration" should be changed to --orientation--.

In paragraph 34, "titrated" should be changed to --adjusted--.

In paragraph 62, "show" should be changed to --shown--.

In paragraph 66, "close the both eyes" should be changed to --close both eyes--.

Appropriate correction is required.

Drawings

2. Figures 5 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 4 and 9 are objected to because of the following informalities:

As per claim 4, the "6" should be changed to --6--.

As per claim 9, the "The process" should be changed to --A process--.

Appropriate correction is required.

4. Claim 8 is objected to as improper for referring to claim 5, from which it does not depend. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3, 6, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the use of parentheses in line 2 renders the claim indefinite. They should be removed if it is desired to positively add the limitation enclosed therein. Further as per claim 1, the phrase "means to sssure the projected laser spot is coincident with the interrogating axis of .." is indefinite because the axis of the projected spot is intended to be parallel to the interrogating axis. Examiner suggests changing the words "spot is coincident with" to --beam is parallel to--.

As per claims 3 and 8, the phrase "laser projection device" is indefinite as it implies that the laser is being projected. Examiner suggests changing "laser projection device" to --laser beam projection device--.

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As per claim 6, the phrase "constant pressure on the ultrasound tip" is indefinite. Examiner suggests changing "on" to --by--.

As per claim 9, there is insufficient antecedent basis for the following terms in the claim: anesthetic drops, headpiece, ultrasound probe, swing arm, carrying platform, and beam. Further as per claim 9, the phrase "pressure is applied to the ultrasound probe" is indefinite. Examiner suggests changing "to" to --by--. Further as per claim 9, in part (e), the phrase "the beam from the ultrasound probe tip" implies that the laser beam emanates from the ultrasound tip, which is physically impossible.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al (US patent No. 5776068) in view of Matsumura et al (US patent No. 5056522).

Silverman discloses apparatus comprising an ultrasound device (ultrasound transducer, see abstract), means for directing ultrasound waves along the visual axis of the eye (column 2, lines 59-67 and column 3, lines 1-56), means for stabilizing and mounting a laser and the ultrasound device in relation to the patient using a headpiece (the entire system is incorporated into head-mounted goggles, column 4, lines 19-20),

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means for projecting a laser spot onto a grid (camera mount, 38, beamsplitter, 34, and fixation target, 30), and means for assuring that the projected axis is coincident with the ultrasound interrogating axis and that the ultrasound probe has the correct horizontal and vertical alignment (Figure 1, in which the principle of orthophoria is used to align the ultrasound transducer axis with the projected target axis), in order to measure the correct axial plane of the eye (At this point, the video-tracking system is aligned to the optic axis, column 4, lines 50-51). Silverman et al does not disclose means for adjusting the pressure applied by the ultrasound transducer to the eye. Matsumura discloses means for adjusting the pressure applied to the eye by the ultrasound probe (the pressure force to the cornea necessary to create a predetermined depression of the cornea, column 6, lines 7-9; see also Columns 4 and 5 which describe the use of optical sources to measure the depression of the eye and adjust pressure accordingly). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Silverman et al to use the means for adjusting the pressure applied by the ultrasound transducer to the eye, as taught by Matsumura et al, in order to eliminate the need for the saline bath required by Silverman et al.

As per claim 9, Silverman discloses a process of measuring the axial length of the eye with an ultrasound device by administering anaesthesia (a drop of anaesthetic, column 2, line 49-50), a headpiece (head-mounted goggles, column 4, line 20), properly aligning the ultrasound probe over the eye (aligned to the optic axis, column 4, lines 47-51), and measuring the axial length of the eye (see abstract). Silverman et al does not disclose modifying the pressure applied by the ultrasound transducer to the eye.

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Matsumura discloses means for adjusting the pressure applied to the eye by the ultrasound probe (the pressure force to the cornea necessary to create a predetermined depression of the cornea, column 6, lines 7-9) as well as optically measuring the depression of the eye and adjusting pressure accordingly (see columns 4 and 5). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Silverman et al to use the means for adjusting the pressure applied by the ultrasound transducer to the eye, as taught by Matsumura et al, in order to eliminate the need for the saline bath required by Silverman et al.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al (US patent No. 5776068) in view of Matsumura et al (US patent No. 5056522), and further in view of applicant's admitted prior art.

The Silverman et al/Matsumura et al combination as applied to claim 2 above discloses all the elements of the claimed invention but does not disclose an apparatus having 6 independently moveable joints. Applicant discloses apparatus having six independently moveable joints as admitted prior art (paragraph 51). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et al/Matsumura et al combination to include the apparatus with independently moveable joints in order to roughly align the ultrasound beam manually with the optic axis of the eye under test prior to conducting the exam using automatic alignment mechanisms.

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10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al (US patent No. 5776068) in view of Matsumura et al (US patent No. 5056522), and further in view of Taenzer (US patent No. 4237901).

As per claim 5, the Silverman et al/Matsumura et al combination as applied to claim 2 above discloses all the elements of the claimed invention but does not disclose a gravity-dependent swing arm that applies the correct, constant, and adjustable pressure to the eye. Taenzer discloses a gravity-actuated probe (see abstract) that is used to adjust the pressure applied to a body undergoing an ultrasound exam (see abstract). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et al/Matsumura et al combination to include the gravity-actuated pressure adjusting mechanism taught by Taenzer in order to apply a constant, desired level of pressure, independent of movement of the patient during the examination.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al (US patent No. 5776068) in view of Matsumura et al (US patent No. 5056522), and further in view of Taenzer (US patent No. 4237901), and further in view of Examiner's Official Notice.

As per claim 6, the Silverman et al/Matsumura et al/Taenzer combination as applied to claim 5 above discloses all the elements of the claimed invention but does not disclose the use of bubble levels. The Examiner takes Official Notice that using a bubble level is well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et

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al/Matsumura et al/Taenzer combination to include a bubble level to provide a measurement means for initial rough adjustment of the horizontal or vertical alignment of the apparatus.

As per claim 7, the Silverman et al/Matsumura et al combination applied to claim 2 above discloses all the elements of the claimed invention except that it does not disclose the use of a carrying platform attached to a swing arm that carries the ultrasound probe and it does not disclose a bubble level. Taenzer discloses a platform (12) carrying an ultrasound transducer (T, Figure 1), attached to a swing arm (cable, 14). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et al/Matsumura et al combination to include the gravity-actuated pressure adjusting mechanism taught by Taenzer in order to apply a constant, desired level of pressure, independent of movement of the patient during the examination.

The Silverman et al/Matsumura et al/Taenzer combination discloses all the elements of the claimed invention except for the use of a bubble level. The Examiner takes Official Notice that using a bubble level is well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et al/Matsumura et al/Taenzer combination to include a bubble level to provide a measurement means for initial rough adjustment of the horizontal or vertical alignment of the apparatus.

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Patentable weight has not been given to the phrase “for assuring proper horizontal and vertical alignment of the ultrasound probe during measurement” because it describes the claim only in terms of intended use language.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverman et al (US patent No. 5776068) in view of Matsumura et al (US patent No. 5056522), and further in view of Taenzer (US patent No. 4237901), and further in view of Examiner’s Official Notice, and further in view of applicant’s admitted prior art.

The Silverman et al/Matsumura et al/Taenzer/Official Notice combination as applied to claim 7 above discloses all the elements of the claimed invention but does not disclose placing the grid approximately 10 feet from the apparatus. Applicant admits that the prior art projected a laser beam onto a distant wall (Figure 5). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the Silverman et al/Matsumura et al/Taenzer/Official Notice combination to project the laser beam onto a distant wall to eliminate the need for a bulky target on the apparatus and to place the target in the far field of the patients view. Patentable weight has not been given to the phrase “which is used as a fixation target and further used to adjust the amount of force applied to the ultrasound tip as described in claim 5” because it describes the claim only in terms of intended use language.

Conclusion

13. Although Applicant uses “means for” language in claim 1, it is the Examiner’s position that this does not invoke 35 U.S.C. 112 6th paragraph. If Applicant concurs, the

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Examiner respectfully requests Applicant to either amend the claims to remove all instances of "means for" from the claims, or to explicitly state on the record why 35 U.S.C. 112 6th paragraph should not be invoked.

Alternatively, if Applicant desires to invoke 35 U.S.C. 112 6th paragraph, the Examiner respectfully requests Applicant to expressly state their desire on the record. Upon receiving such express invocation of 35 U.S.C. 112 6th paragraph, the "means for" phrases will be interpreted as set forth in the Supplemental Examination Guidelines for Determining the Applicability of 35 USC 112 6. (Federal Register vol. 65, No. 120, June 21, 2000.)

Failure by Applicant in their next response to address the 35 U.S.C. 112 6th paragraph issues in accordance with 37 C.F.R. 1.111(b) or to be non-responsive to this issue entirely will be considered as a desire by Applicant NOT to invoke 35 U.S.C. 112 6th paragraph.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5369454 Reinstein et. al. System for aligning ultrasound beam with optic axis.

US 4848340 Bille. Project onto eye.

US 4154114, Katz et al. Spring-loaded transducer

US 4930512 Henrickson et al. Spring-loaded transducer.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Talman whose telephone number is 571-270-3029. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James R Talman
Examiner
Art Unit 3709

Jrt



BENNY TIEU
PRIMARY EXAMINER